Case Study Solution –

Below is the solution of Case study, I have tried to showcase my approach in 5 steps as stated also in Problem statement. All files are also at GitHub so one can download to local system.

One can click directly on the image icon to go to the respective files.

1. Please find attached code, files and answers to given problem statement at github. Link for the same is shared in 5th point at the end.
2. Database Shema to hold places and people data:

Refer database\_schema\_creation.sql file and below ER-diagram –



**People**

id int(PK)

given\_name varchar

family name varchar

date\_of\_birth date

place\_of\_birth varchar(FK)

**Places**

id int(PK)

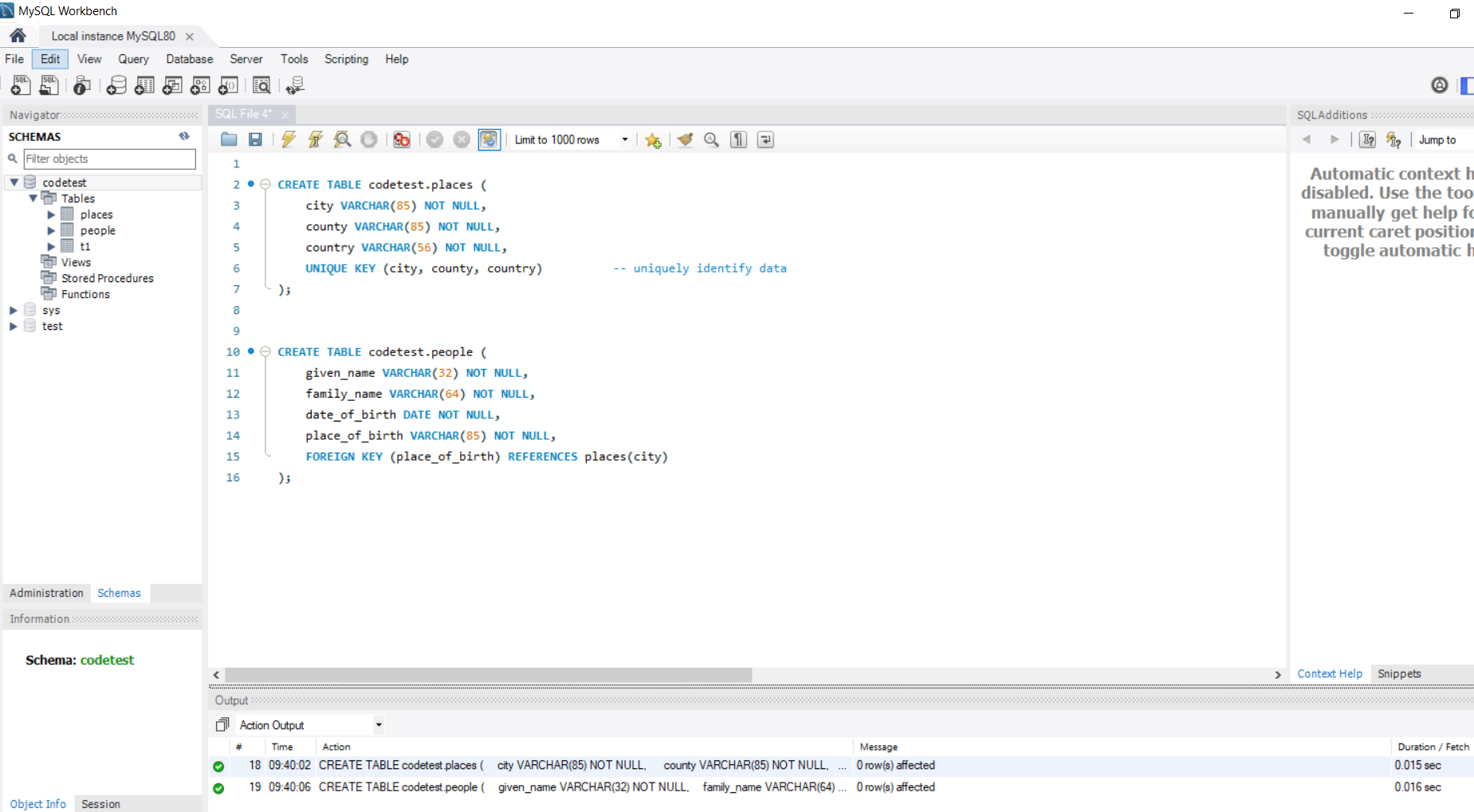
city varchar

county varchar

country varchar

UNIQUE KEY (city, county, country)

Ran database schema script through MySQL Workbench.



Note: docker-compose.yml having appropriate configuration to run code within docker container.

1. Load dataset (csv) to database tables (places, people) –

We use places.csv and people.csv as per given source



To load datasets through python code, load\_datasets\_to\_mysqltables.py python file along with Dockerfile and requirements.txt is used

Another Approach to directly load (**without docker container**) data from csv to Mysql is as below:

* Connect to the MySQL database via the command-line client:

docker compose run database mysql --host=database --user=codetest --password=swordfish codetest

mysql> set global local\_infile=1

* Run Below Queries:

load data local infile 'C:/data/places.csv'

into table places

fields terminated by ','

enclosed by '"'

escaped by '"'

lines terminated by '\r\n'

ignore 1 rows;

load data local infile 'C:/data/people.csv'

into table people

fields terminated by ','

enclosed by '"'

escaped by '"'

lines terminated by '\r\n'

ignore 1 rows;

1. Outputting a summary of content in JSON format-

The output file should consist of a list of the countries, and a count of how many people were born in that country. Query for the same is as below



To generate JSON file through python code, json\_output\_query.py python file along with Dockerfile and requirements.txt is used

**Run commands:**

**pip install -r requirements.txt //to have required library functionalities**

**pip3 install cryptography**

**docker compose up –build //to start docker compose**

1. link to github repo –

https://github.com/siddhi194/Case-Study-Solution